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BOTANICAL NOTES FROM NORTHERN VERMONT

ARTHUR STANLEY PEASE

FROM Burke Mountain, near East Burke, Vermont, there is a remarkable view of Willoughby Lake and its enclosing mountains, Hor and Pisgah, and thence, on August 7, 1929, I also observed, about four miles to the east of Mt. Pisgah, a mountain with steep cliffs, facing, not west, like the classic cliffs and talus of Pisgah, but eastward. On inquiry I learned that this mountain was named Bald Mountain and that it lay in the eastern corner of the town of Westmore, and in the hope that so near a neighbor of the Willoughby mountains might itself be not without interest I determined to visit it the next day.

During the same afternoon, as I drove on from Seymour Lake in Morgan through the town of Holland, I stopped at an interesting stretch of road in the latter township and immediately found *Linum catharticum* L., growing in abundance in the ditch and in an adjacent rich clearing. This European species has been reported from various stations along the coast, particularly in Maine, but not hitherto, so far as I am aware, from the interior of New England. Here it appeared thoroughly at home.

After a night spent near Salem Pond in Derby I explored, on August 8, the beach at its northern end, finding a large amount of *Spartina Michauxiana* Hitchc., and, in sandy woods nearby, much *Halenia deflexa* (Sm.) Griseb. (also found later in the day along a wood road in the town of Ferdinand). A pasture near a farmhouse at the lower end of the lake contained conspicuous patches of *Thymus Serpyllum* L., some of them several yards in diameter.

Later that forenoon I drove through the township of Brighton to the most convenient approach to the Bald Mountain cliffs, near Job's pond in the eastern part of Westmore. There I left the road and skirted the pond to the foot of the mountain. A scramble up steep slopes led to slides upon which sprawled *Astragalus Blakei* Eggleston. On reaching the top of the talus (where *Rhus Toxicodendron* L. was abundant) I found the line of cliffs very extensive, probably nearly as far outstretched as those of Mt. Pisgah, though not so lofty, and on the lower parts of the calcareous ledges and the upper and finer portions of the talus was able to gather, in embarrassingly rapid succession, *Cryptogramma Stelleri* (Gmel.) Prantl, *Woodsia glabella* R. Br., *Muhlenbergia racemosa* (Michx.) BSP., a *Calamagrostis* as yet undetermined but near *C. hyperborea* Lange, *Sphenopholis pallens* (Spreng.) Scribn., *Carex scirpoidea* Michx., *C. eburnea* Boott, *Clematis verticillaris* DC., *Draba arabisans* Michx., *Braya humilis* (C. A. Mey.) Robinson, var. *novae-angliae* (Rydb.) Fern., *Saxifraga oppositifolia* L., *Potentilla fruticosa* L., *Rubus odoratus* L., *Rosa blanda* Ait., *Celastrus scandens* L., *Apocynum cannabinum* L., *Asclepias syriaca* L., *Satureja vulgaris* (L.) Fritsch, *Campanula rotundifolia* L., *Lobelia Kalmii* L., *Eupatorium urticaefolium* Reichard, *Artemisia canadensis* Michx., and *Senecio Balsamitae* Muhl. Of most of these specimens have been deposited in the herbarium of the New England Botanical Club, and duplicates of many in that of Amherst College. Further search, especially at a different season, and an examination of the crests of the cliffs (which I did not investigate) might well yield yet others of the characteristic Willoughby rarities.

AMHERST COLLEGE.

BUTOMUS UMBELLATUS AT LAKE CHAMPLAIN.—So abundant is the newcomer from Europe, *Butomus umbellatus*, along the shores of the St. Lawrence near Montreal and elsewhere,¹ that I have been expecting to find scattered specimens of it on muddy shores in the northern part of Lake Champlain. Instead of this, however, my first discovery of this interesting plant was more than a hundred miles south of the Canadian border. Here I found it, August 11, 1929, well established and flourishing, on the South Bay of Lake Champlain, in Dresden, New

¹ C. H. Knowlton, RHODORA xxv, 220-221, 1923; Frère Marie-Victorin, Contributions du Laboratoire de Botanique de l'Université de Montréal, No. 13, 83-84, 1929.

York, near the bridge from Whitehall. It was associated here with such plants as *Potentilla Anserina*, *Proserpinaca palustris*, and a ripened sedge of the *Eleocharis palustris* group. As it is fruiting rather heavily in its new home it is more than likely to spread, especially along the marshy rice-meadows of southern Lake Champlain, and ought soon to be reported from Vermont.

This "Flowering Rush" has a large umbel of pink flowers, the three sepals and the three petals veined with darker color. It has six separate carpels, and has no placentae, the seeds being borne directly on the sides of the carpel in large numbers.—CLARENCE HINCKLEY KNOWLTON, Hingham, Massachusetts.

BUTOMUS UMBELLATUS IN THE LAKE CHAMPLAIN BASIN

W. C. MUENSCHER

WHILE crossing the temporary bridge over South Bay, an arm of the southern part of Lake Champlain, on August 16th, 1929, my attention was attracted by what from a distance appeared to be a large *Allium*-like plant growing in extensive areas of muddy flats and shallow water along both shores. Upon closer examination the plant proved to be the flowering rush, *Butomus umbellatus* L., of the family *Butomaceae* closely related to the *Alismaceae*. As far as I am aware, this species has been reported in North America only from Canada where it grows over extensive areas in marshes along the St. Lawrence River.

During the latter part of August, while I was engaged in a study of the aquatic vegetation of Lake Champlain as a part of the biological survey of the Lake Champlain watershed conducted by the New York State Conservation Department, I had an opportunity to observe that *Butomus* is very generally distributed in the marshes and shallow water bordering the southern part of Lake Champlain. It was not observed in the northern part of the lake. In Washington county, New York, *Butomus* was observed in the following localities: South Bay, very abundant on clay flats and in water up to one meter deep; Whitehall, along the border of a mill pond and along the Champlain canal from Whitehall northward for about ten miles to the Dresden Narrows in Lake Champlain. In Vermont *Butomus* was observed in Rutland county, along the shore of Lake Champlain northward to the Dresden Narrows, and in Addison county along the outlet of East Creek.

In Europe *Butomus* occurs in marshes and along borders of streams and lakes from Italy northward to Norway. Thomé¹ gives a good colored plate and description of the species. *Butomus* not only produces many seeds but also numerous small cornlike buds are developed on the submerged rhizome. It is, therefore, well adapted for spreading rapidly under favorable conditions.

Knowlton,² 1923, in discussing the distribution and rapid spread of *Butomus umbellatus* along the St. Lawrence River, concluded with the following statement: "As it has many seeds it would seem quite possible for it to work gradually up the St. Lawrence and its tributaries, so that some day it may make its appearance by Lake Ontario or Lake Champlain within the limits of the United States." The extent of the area already occupied by *Butomus* in the southern Champlain Valley indicates that probably it became established prior to 1923. It is now one of the dominant species of the marsh and shore vegetation in this region, and in the future it may be expected to appear in similar situations over a wider area.

CORNELL UNIVERSITY.

SOME NEW SPECIES AND VARIETIES FROM OREGON

L. F. HENDERSON

Scirpus malheurensis, sp. nov. Stems 18–24 dm. high; primary involucrel bract slightly exceeding the inflorescence, secondary ones much shorter; spikelets cylindric-ovoid, 8–12 mm. long by 4–5 mm. thick, greenish-brown, 2–4 in the clusters; rays from sessile to 2.5 cm. long; scales much cleft, their edges ciliate with long many-celled hairs; midvein long-excurrent, the tip either included between the long lobes of the scale or rather long-aristate, serrate or hispid with long fang-like brown teeth which are 1-celled and extend, reduced in size, far down the back of the scale; filaments of the 3 stamens strap-shaped; bristles 6, slightly longer or shorter than the akene, retrorsely barbellate to near the base; style 2-cleft; akene 2–2.5 mm. long, 1.25–1.5 mm. wide, obovate, plano-convex and often angled on the back, generally light-olivaceous, strongly mucronate, finely pitted under high magnification.—In water or on wet shores of Malheur Lake, Harney County, OREGON, July 15, 1927. My no. 8655.

Close to *Scirpus acutus* Muhl., but differing in having the involucrel

¹ Thomé, *Flora von Deutschland* 1: p. 84. 1886.

² Knowlton, Clarence H. *Butomus umbellatus* on the St. Lawrence River. *RHODORA* 25: 220–221. 1923.

bract longer than the inflorescence; the scales nearly round and much-cleft; the long hairs on the edge of the scales; the remarkable dark teeth or papillae on the back of the scale and on the long-exserted midrib.

SCIRPUS CONGDONI, Britton, var. **minor**, var. nov. Differs from the typical form of the species in lower stature, at most 28–35 cm. high; shorter rays; stem leaf-bearing at middle; lower leaves only 1 dm. long or less; short scales merely acute to short-acuminate.—Collected by me along a creek, Mackenzie Pass, OREGON, my no. 7108; also by *Lyle Wynd* at Pole Bridge Creek, Crater Lake Park. His no. 1769.

JUNCUS (§*NODOSI*) **inventus**, sp. nov. Stems 3–6 dm. high, arising singly from somewhat enlarged nodes of a very long rootstock; basal leaves longer than or shorter than the stem, stiff, terete as are those of the stem; stem-leaves erect, the upper internode of the stem diverging strongly from the leaves; heads few in a rather dense cluster, brown, 8–12 mm. in diameter; perianth 4–5 mm. long, its outer segments slightly longer and more subulate than the inner; stamens 6, half the length of the perianth, anthers slightly longer than the filaments; capsule *oval to ovate*, but sloping gradually to an apiculation 1–1.5 mm. long, 3-sided, 1-celled; seeds yellow, either acute or truncate, with a white apiculate tip, reticulate with 20–30 longitudinal lines and cross-lined areolae.—Moist, sandy shores of Siltcoos Lake, 2 miles from the ocean, Lane County, OREGON. My no. 6091.

I first named this plant for the lake where it was found and made a few distributions under that unpublished name, but I am now convinced that this plant occurs in other spots in sand along the Pacific, hence the change in name. *Juncus inventus* is related to *J. nodosus* L., more nearly to *J. Torreyi*, Coville. It were better, it seems to me, to put these all together as varieties of *J. nodosus*, but since *J. Torreyi* has been cut off, we must recognize this species, as there is more difference between this and either *J. nodosus* or *J. Torreyi* than there is between those two species. This differs from *J. Torreyi* in darker heads; strongly divergent upper joint of stem; wider, less subulate capsule; and nearly equal perianth-segments, the outer slightly longer and more apiculate, and all noticeably scarious-edged.

DAMASONIUM CALIFORNICUM, var. **Biddlei**, var. nov. Differs from typical *D. californicum*, Torr. in narrower leaves, most of them long, narrow phyllodes; petals more deeply dentate and with more teeth; and rather more akenes.—Common in ditches, in water or mud, near Burns, Harney County, OREGON, June 23, 1927. My no. 8256.

Dedicated to the memory of the late Henry J. Biddle, an amateur botanist of Portland and a most helpful friend.

ALLIUM GEYERI, Wats., var. **graniferum**, var. nov. Differs from the ordinary form of northern Idaho in having numerous bulblets amongst the flowers or entirely taking their places.—Moist to wet natural meadows, Austin Ranch, near Austin, Grant County, OREGON, my no. 5397, also *Cusick*, no. 1827.

The spathe is often 3-valved, sometimes 2-valved. Though the crests are lower than in the typical form of the species, I can find no good specific characters to separate them.

ALLIUM Robinsonii, sp. nov. Bulb ovoid, large for the size of the plant, devoid of special reticulation; stem slender, $\frac{2}{3}$ under ground, slightly 2-edged, 3–7 cm. long; leaves much exceeding the stem, arcuate, 1.5–2 mm. wide; bracts 2, ovate, abruptly acute, rose-purple; flowers few, 5–12, 7–9 mm. long; pedicels slightly shorter; perianth-segments white to light-pink, with red midvein, obtuse, oblong; stamens $\frac{1}{2}$ to $\frac{1}{3}$ the length of the segments; ovary distinctly crested; style shorter than the stamens or about equaling them; filaments rather coarsely confluent.—Gravel and drifting sand, confluence of John Day River with the Columbia, OREGON. My no. 5110.

Differs from the related *Allium Brandegei* in crested ovary, obtuse segments of corolla, and larger bulbs, with no special reticulation; from *A. parvum*, Kell. in its 2-edged stem, narrower leaves and conspicuously crested ovary. I take pleasure in dedicating this pretty species to Dr. B. L. ROBINSON of the Gray Herbarium, to whom I am under many obligations for past courtesies.

ALLIUM mirabile, sp. nov. Plant 15–20 cm. high, very slender and sinuous, with central bulb generally wanting, but with 1, mainly 2, oblong, tuber-like, strongly divaricate bulbs at base, with many filiform root-fibres from the base of the stem; leaves filiform, 2–3, shorter than the stem; bract one, often 2-lobed, ovate, very thin, abruptly acuminate; umbel 7–12-flowered; flowers on slender pedicels (7–12 mm. long), white to light-pink; segments 10–12 mm. long, narrowly lingulate, but involute and appearing acuminate; stamens half as long as the segments, slender, with small cordate-sagittate, sharply pointed anthers; filaments dilated at base and united into a scalloped ring; ovary blunt and crestless, ripening only 1 or 2 seeds.—Dry, shady fir woods in loose, rocky soil, Eight Dollar Mt., near Selma, Josephine County, OREGON, June 17, 1926. My no. 6098.

Allium mirabile greatly resembles *A. Bolanderi*, they agreeing in the peculiar bulbs and serrate inner perianth-segments. But, while the perianth-segments in true *A. Bolanderi*, according to an examination at the Gray Herbarium, are *acuminate*, they are never so in *A. mirabile*, but lingulate and obtuse or at most acutish; the leaves are only 0.5 mm. wide in this species, wider in *A. Bolanderi*; the bract is

single, at most 2-parted, broadly ovate and apiculate; stamens nearer $\frac{1}{3}$ than $\frac{1}{2}$ the length of the perianth; filaments dilated at base. From an examination of *A. Bolanderi*, made for me at the Gray Herbarium, I am informed that "the outer bulb-coats in *A. Bolanderi* are rather thick and firm; in your plants they are very thin, and, when wet, become flaccid."

ALLIUM punctum, sp. nov. Plant 6–9 cm. high, slender; leaves 2, slightly to strongly falcate, 2–3 mm. wide, slightly to much exceeding the stem and closely investing it to about its middle, where they widely diverge; bulb ovoid, 1.5–2 cm. long; outer coats of bulb very dark, central yellowish-gray, inner white, some of the central coats with oblong-hexagonal cells marked all over their faces and walls with minute indentations as if made by the point of a pin; bracts 2, abruptly acuminate or acute, 0.66–1 cm. long, colored like the perianth; flowers 12–16, on pedicels about 1 cm. long, dark wine-color to nearly black-purple; perianth-segments 8–10 mm. long, oblong, rounded to acutish at apex; stamens $\frac{2}{3}$ the length of the perianth, filaments thick-subulate at base and united into a scalloped ring; crests of ovary 3, wide and mountain-like, slightly retuse at apex, white.—In moist, or later dry, rocky flats, near the Donner-and-Blitzen River, 8 to 10 miles north of Frenchglen, Harney County, OREGON, May 20, 1927. My no. 8813.

The beautifully punctate middle coats of the bulb account for the name.

IRIS innominata, sp. nov. Plant about 30 cm. high or less, from a slender ascending rootstock 3–4 mm. in diameter; leaves abundant, dark-green above, lighter below, violet-purple or green at base, 2–3 mm. wide, ordinarily with revolute margins, longer or shorter than the stems, the apex narrowly pointed; bracts or stem-leaves 2 or 3, their clasping bases 4–9 cm. long, the free portion 1.5–3 cm. long; bracts subtending the flowers about 4 cm. long, nearly equal, green, broadly lanceolate to ovate when opened, scarious at edges; flowers generally 2, on pedicels 5–10 mm. long; flower-tube 2–3 cm. long, almost filiform, the whole flower brilliant dark-yellow, with delicate purple lines on the sepals; sepals oblanceolate, about 4.5 cm. long above the short throat, very narrow at base; petals slightly shorter, lighter yellow and without purple lines, narrowly oblanceolate to elliptic, entire; capsule oblong to oval, 2–3 cm. long; seeds 3 mm. long, nearly round in outline, strongly angled, their sides vermiformly marked.—Dry, sunny woods, Rogue River, about 8 miles above the ferry at Wedderburn, Curry County, OREGON, fl. May 23, fr. July 14, 1929. My no. 10,086.

Differs from *Iris Purdyi*, Eastwood in dark-green leaves only 2 mm. wide; lower bracts or stem-leaves not overlapping, their sheathing

bases not inflated; flower-bracts shorter; sepals shorter, as is the perianth-tube; capsule obtuse at base. From *I. californica* it differs in narrower, darker leaves; stem-leaves more sheathing; shorter and less acuminate bracts; and much shorter perianth-tube. The color of the flower is exactly that of *I. bracteata*, or even darker. *I. Douglasiana* was in places up the Rogue River, associated with *I. innominata*, and wherever this was the case it had much more yellow than usual, showing the beginnings of hybridization.

MONTIA Sweetseri, sp. nov. Plant procumbent to accumbent, with numerous stems diminishing in size to a flagellate tip and strongly resembling those of *M. parvifolia*, all from an exposed rootstock or caudex 1–10 cm. long and 4–6 mm. thick; radical leaves round to ovate, 3–4 cm. long including the petiole (2–3 cm.); stem-leaves of the same shape but on short petioles, the smallest only 3–4 mm. long; flowers pink, on pedicels about 1 cm. long, these lengthening in fruit to even 2 cm.; sepals round, 3–4 mm. long, greenish-pink; petals oblanceolate, emarginate, mostly about 14 mm. long; seeds slightly pitted, shining, 1.5 mm. in length, 1 mm. in width.—Discovered by Prof. and Mrs. A. R. Sweetser of the University of Oregon, on exposed rocks and earth at the base of Humbug Mountain, which overlooks the ocean at Brush Creek, Curry County, OREGON, May 30, 1929, later by myself, and in fruit in July. My no. 10,193.

In many ways this plant superficially resembles *Montia parvifolia*, but it differs in every character: size and length of rootstock, size of leaves, shape of cauline leaves, greater size of flowers, and larger seeds, those of *M. parvifolia* never being over 1 mm. long; and to show that this is not merely size due to location I may say that *M. parvifolia* was collected by me north, east and south of this spot.

SILENE insectivora, sp. nov. Plant 6–18 cm. tall, very glandular from top to bottom; lower leaves from 4–18 cm. long, those of the lower part of the stem much longer than the radical, from obovate-spatulate to linear-oblanceolate, obtuse to acute; upper leaves decreasing rapidly to bracts, 1–2 cm. long at summit; peduncles branching, 1–3 cm. long; pedicels long, erect to nodding; flowering calyx oblong, 15–20 mm. long by 6 mm. wide in center, its lobes narrowly triangular to lingulate, often over $\frac{1}{3}$ the length of the tube, not ciliate but with abundant long glands; petals $\frac{1}{4}$ longer than the calyx, narrowly cuneate, the claw somewhat lacerate above, the blade divided into 2 foot-like parts; appendages narrowly lanceolate, acute; stamens slightly shorter than the styles; ovary oblong, with styles about $\frac{1}{2}$ the length of the petals; ripened capsules and seeds unknown.—Collected by L. Constance, student at the University of Oregon, in meadows of Sprague River, Klamath County, OREGON, June 28, 1928. My no. 9427.

This plant is related to *Silene Scouleri* and *S. Hallii*, but differs from both in general appearance, long peduncles and pedicels, stems and foliage so glandular as to be covered from top to bottom with small insects, very long calyx-lobes, oblique foot-like lobes to corolla, and lanceolate acute appendages.

SILENE MONTANA Wats., var. **viscida**, var. nov. Agreeing with Watson's description of *S. montana*, save that the whole plant, instead of being finely pubescent, is finely glandular from top to bottom.—Collected by *Lyle Wynd*, student at the University of Oregon, in dry woods, Crater Lake Park, OREGON, in High Canadian Zone, July 27, 1928. His no. 2357.

RANUNCULUS OCCIDENTALIS, var. **dissectus**, var. nov. This plant, from its pubescence and long, hooked akenes, belongs with *R. occidentalis*, but in its deeply cleft to divided radical leaves it looks, at first view, like some form of *R. orthorynchus*.—Dry slopes of Crater Lake Park, OREGON, near Pole Creek Bridge, where collected by *Lyle Wynd*, July 12, 1928. His no. 2221. It was also collected by *Wm. C. Cusick* in Summit Prairie (no. 2643), later by *L. E. Dethling*, of the University of Oregon, on moist banks of Upper Paulina Creek, Paulina Mts., Oregon (no. 77).

CARDAMINE Pattersoni, sp. nov. Plant annual, 11–12 cm. high, much branched from the base or near it, so as to be 7–9 cm. wide at top; whole plant glabrous, or at most puberulent at base; leaves with 3–5 round to obovate leaflets 3–4 mm. long, the terminal leaflet often slightly undulate; pedicels becoming thick and lengthening in fruit, about 5–6 mm. long in flower, 15–20 mm. in fruit; rachis rather zigzag; sepals colored, 2 mm. long, ovate; corolla dark-pink or rose; petals 6 mm. long, obovate, retuse; capsule including style 24 mm. long, style about 3 mm., capsule 1.5 mm. wide; seeds yellowish-brown, 1 mm. wide by 1.25 mm. long; cotyledons accumbent, radicle very noticeable.—Discovered by *Rollo Patterson*, student at the University of Oregon, on moist, mossy cliffs of Saddle Mt., Clatsop County, OREGON, at about 2800 feet elevation, June 10, 1928. No. 22 of his Saddle Mountain collection.

Only two specimens of this pretty little plant were collected, but fortunately both were in flower and ripe fruit. This plant is so unique that no other comes very near it, at least in the Western United States.

ARABIS Wyndii, sp. nov. Plant about 4 dm. high, branching at base; leaves and lowest part of stem with abundant forked hairs, most of the stem and upper surfaces of leaves mainly glabrous; leaves crowded at base, oblanceolate, entire, 1–2 cm. long, strongly ciliate with forked hairs, mainly glabrous above, hairy below; stem-leaves 8–12 mm. long, mainly lacking auricles, linear; raceme rather many-fruited, flowers as yet unknown; mature pedicels reflexed, glabrous, slender, 3–6 mm. long; capsules 5–8 cm. long, 1.5–2 mm.

wide, straight or slightly arcuate, the point 1-3 mm. long, style and stigma very short, valves nerved at base $\frac{1}{3}$ their length; seeds more or less 2-rowed, orbicular, narrow-winged, 1.5 mm. wide.—Collected by *Lyle Wynd*, student at the University of Oregon, in Crater Lake Park, OREGON. Wynd's no. 2322.

This plant appears to belong with *A. pulchra*, Jones, but differs in its furcate hairs toward the base of the plant; glabrous upper stem and leaves, the latter with ciliate edges; and glabrous capsules.

THERMOPSIS subglabra, sp. nov. Plant 9-10 dm. high, entirely glabrous save the calyx, edges of bracts and back of suture of pod, which are appressed-pubescent; stipules about 4 cm. long, oval to ovate, apiculate to obtuse, more than 2 cm. wide; petioles slender, 3-4 cm. long; leaflets oblanceolate to obovate on the same plant, 3-5 cm. long, 1-2.5 cm. wide; flowers 10-13, about 2 cm. long, on slender, glabrous pedicels 5-10 mm. long; bracts ciliate, oblong to ovate, 6-8 mm. long; calyx appressed-pubescent to slightly villous, nearly regular, campanulate, with ovate nearly equal teeth; corolla with banner much shorter than the wings and keel; young legume glabrous save the upper edge, which is appressed-ciliate; mature fruit unknown from this locality. (An unnamed specimen in fruit, *John R. Leiberg*, no. 4195, "from grassy slopes of Umpqua-Rogue River Divide, near Head of Elk Creek" is undoubtedly the same, as it is equally glabrous on fruit and all other places save the calyx).—Shady woods of Culp Creek, near base of Bohemia Mt. Divide, between Lane and Douglas Counties, OREGON. First collected by *Rollo Patterson*; afterward by myself. My no. 9959.

Close to Howell's *Thermopsis gracilis*, but of larger size and lacking its abundant pubescence.

COTYLEDON glandulifera, sp. nov. Plant erect, 22-27 cm. high, from a cluster of spatulate leaves at the summit of the rather bare, thick, long rootstocks (6-8 mm. thick); whole plant, save flowers of a decided red-purple; lower $\frac{2}{3}$ of stem bare, upper $\frac{1}{3}$ glandular and thickly clad with reddish, glandular-ciliate oblong bracts; flowers greenish-yellow, 12-14 mm. long; calyx-lobes ovate, very acute, 5 mm. long, glandular-ciliate and slightly united; stamens slightly longer than the calyx, with oblong anthers, filaments triangular-subulate; carpels nearly erect, slightly united at base, finely papillate, 10 mm. long, reddish; pedicels shorter than the corollas, rather thick, glandular-pubescent; seeds many, narrowly oblong-lanceolate, striate and cross-barred.—Discovered by *Mr. and Mrs. J. R. Leach* of Portland, Oregon, June 1, 1928, along the trail down the Rogue River, 3 miles below Alameda, Josephine County, OREGON. Their no. 1599.

The discoverers say of it: "The whole plant strikes your eye at some distance by its red color."

DODECATHEON poeticum, sp. nov. Stem eventually 22–30 cm. high, glandular-puberulent its whole length, the base swollen and bearing many descending delicate fibrous roots; leaves obovate to oblanceolate, obtuse to apiculate, the blade 5–12 cm. long, petioles from as long as to $\frac{1}{3}$ as long; flowers 1–10, on pedicels 1–4 cm. long; calyx-lobes ovate-lanceolate, slightly shorter than the ripe capsule; corolla with slightly yellow circle at base, then a crimson, crenate narrow band, next a broad yellow band, then the main rose-pink outer portions; staminal tube generally black, sometimes with some yellow, half as long as the 5 anthers; capsule ovoid, 4–7 mm. long, opening generally through the teeth.—Bluffs of the Columbia River, near the east line of Hood River County, OREGON, April 2, 1924, fruit May 13. My no. 503 of the 1924 collection.

I wrote up this species in 1924 and submitted flowers and fruit to the late Prof. C. V. Piper at Washington. He thought it a good species and advised publication. I hesitated at that time to add to the flood of new species of *Dodecatheon*, and laid it by. Last year I sent it to Prof. Morton E. Peck, studying at the Gray Herbarium, and he agreed with Piper that it is an undescribed species, differing, at any rate, from anything in the Gray Herbarium. Since the crimson ring on the flower so simulates in miniature that of *Narcissus poeticus* I have given it this specific name.

SYNTHYRIS ROTUNDIFOLIA, var. **Sweetseri**, var. nov. Differs from the typical form of the species only in remarkably long, rather than round, and more incised leaves; larger stature and bluer flowers.—Collected by Prof. A. R. Sweetser, Head of the Department of Botany at the University of Oregon, as well as by myself, on shady bluffs of Slate Creek, Redwood Highway, Josephine County, OREGON, March 22, 1925; subsequently found in many places. My no. 5860.

ARTEMISIA DISCOLOR, var. **glandulifera**, var. nov. Differs from the typical form of the species in not being tomentose below, but very glandular; the flowers also conspicuously glandular and giving off a delicious aroma.—Growing on the edge of a cold stream, dropping from the subalpine heights of Eastern Stein's Mts., beyond Alvord Ranch, Harney County, OREGON, July 2, 1927. My no. 8489.

CHRYSOETHAMNUS BLOOMERI (Gray) Greene, var. **pubescens**, var. nov. Differs from the typical form of the species in being pubescent, or among the heads slightly tomentose.—Sent to us from open Fremont Valley, northern Lake County, OREGON, by Mrs. Alvin S. Hawk. No. 11455 of the University of Oregon Herbarium.

HIERACIUM CYNOGLOSSOIDES, Arv., var. **ursinum**, var. nov. Differs from the typical form of the species, which is always glabrous above to but slightly pubescent, in being covered nearly to the base with black, glandular hairs, giving it a resemblance to a bear's coat.—Amongst yellow pines, on serpentine outcrops, 2 miles west of Roose-

velt Highway at Carpenterville, Curry County, OREGON, July 14, 1929. My no. 11426.

LUINA HYPOLEUCA Benth., var. **dentata**, var. nov. Differs from the typical form of the species in its strongly dentate leaves, their upper surfaces apparently always tomentose or floccose; flowers 14–15 mm. long.—Rocky bed and banks of the South Coquille River, at the bridge below Powers, Coos County, OREGON, July 17, 1929. My no. 11431.

SOLIDAGO CALIFORNICA, var. **aperta**, var. nov. Like the typical form of the species, as it exists around Grant's Pass, OREGON, but with the clusters of the panicle from contiguous to 3 cm. apart.—Dry, exposed hillside, 15 miles down the Illinois River, below Selma, Josephine County, OREGON, June 18, 1926. My no. 7073.

All types of these plants are in the herbarium of the University of Oregon. Many of the collectors not having used numbers, I have in such cases used my own.

UNIVERSITY OF OREGON,
Eugene, Oregon.

SOME RARE INTRODUCTIONS NEAR HARRISBURG, PENNSYLVANIA.—While botanizing in an abandoned field near Harrisburg, Pennsylvania I found a large colony of *Thlaspi perfoliatum* L. According to records available only two stations of this plant have been reported on this side of the Atlantic, one at Hamilton, Ontario and another at Geneva, New York. The colony was located on a shale hillside, together with *Viola arvensis*, *Silene latifolia*, *Lychnis alba* and *Lepidium campestre*. In the same locality I found *Thlaspi arvense* L. which is not uncommon in this section.

Another interesting find was an extensive colony of *Cynanchum nigrum* (L.) Pers. This colony was located in the South Mountain, three miles from Marsh Run, York County, Pennsylvania. There is no record of this plant from this State, except in the vicinity of Philadelphia. Both of these plants are of European origin, and it would be interesting to know how they became established in central Pennsylvania.—H. A. WARD, Harrisburg, Pennsylvania.

A NEW LEPIDIUM FROM NORTH CHINA

ARTHUR PAUL JACOT

Lepidium apetalum was described by Willdenow from a single maimed specimen from Siberia. He states that the leaves are

lanceolate-linear, entire, sessile and that the stems are procumbent, ascendant at tips.

Busch (1913, in: *Flora Sibiriae et Orientis Extremi*, part 25, Cruciferae, pp. 90-93) redescribes and figures what *he* calls *L. apetalum*. This species is not procumbent but somewhat lax, the leaves with a tooth on each side near the apex. The description, however, calls for basal leaves which are considerably cut. This is not, therefore, *L. apetalum* of Willdenow but seems identical with *L. micranthum* Ledeb. Note the distribution on page 93 in two distinct bands across eastern Asia separated by Manchuria and Mongolia.

Thellung in his monograph (*Die Gattung Lepidium* (L.) R. Br.; 1906) describes *L. apetalum* as having leaves auriculate, semiamplexicaul, rarely somewhat attenuate and approaching lanceolate, and the base of capsule attenuate, acutish. This again is another species.

We are thus faced with the fact that *L. apetalum*, which is chiefly self-fertilized, is a group of species.

The species common about the alkaline, semiarid plain of north China (and as represented about Tsinan) is distinct from the Siberian forms. It may be known and characterized as follows:

LEPIDIUM chitungense sp. nov. Annual; spreading, low, rarely exceeding 10 inches in height, branches springing from close to ground, spreading, stiff, making a broad angle with axis, sometimes nearly a right angle, covered with short, clavate pubescence; leaves linear-oblong, sometimes lowest leaves narrower towards base, always broadening to a clasping sometimes semiauriculate base, the basal leaves with remote, blunt teeth, the upper similar but the teeth more slender, or with only one or two teeth near apex or none (i. e. strap-shaped), glabrous or sparsely clavate-pubescent on veins and margins; flowers apetalous (?), with 2 stamens; sepals white-margined especially at apex, center of disc of inner and outer ones often barbate; mature capsule elliptic-ovate, emarginate at apex, with a narrow wing above. —TYPES: In the Gray Herbarium and the herbarium of the Shantung Christian University.

Thus the flowers and fruits are identical with those of *L. ruderale* with which *L. chitungense* is now found intermingled on the University campus, though five years ago it was alone. It differs strikingly in its low, spreading habit of branching, in its leaves which are never more than toothed, while in *L. ruderale* they are lyrate, the teeth *always* simple, and in the clavate pubescence (showing it to belong to the *apetalum* group).

My thanks are due to F. Gagnepain of the Paris Herbarium, M. L.

Fernald of the Gray Herbarium and members of the staff of the Kew Gardens for aid in this study.

SHANTUNG CHRISTIAN UNIVERSITY,
Tsinan, Shantung, China.

WHAT IS SCIRPUS GLAUDESCENS WILLD.?

OLIVER ATKINS FARWELL

WILLDENOW's description is as follows:

*3. *SCIRPUS glaucescens*.

S. culmo compresso glaucescente, vaginis truncatis, spica solitaria lanceolata, squamis ovatis, radice repente.

Habitat in America boreali 21 D.

Radix perennis repens. *Culmus* sesquipedalis et ultra glaucovirescens compressus. *Vaginae* ad culmi basin truncatae muticae laxae. *Spica* lanceolata vix semipollicaris. *Squamae* ovatae superiores ovato-lanceolatae obtusiusculae, margine membranaceae. *Stamina* tria. *Stylus* trifidus. *Semen* obovatum apice tuberculatum. *Setae* longitudine seminis.

It would be a difficult matter to draw a better description than the above of the plant now passing as *Eleocharis acuminata* (Muhl.) Nees. It cannot be *E. palustris* (L.) R. & S., because that species is not known to have three styles; if *E. palustris* in any of its variations has three styles, I have been so unfortunate as not to have had any such pass under my observation. Three-styled plants should be excluded from the two-styled *Eleocharis palustris*. Fernald and Brackets, in this journal for April, 1929, have monographed the group *Palustres* of the genus *Eleocharis*, and have recognized eight species and two varieties. They give an extended discussion of this species, but, presumably, call it a small form of *E. palustris*, mainly because A. Gray identified the plant in the Willdenowian herbarium as *E. palustris*. Since A. Gray identified the Willd. Herb. plant as *E. palustris*, it is to be supposed that it must be two-styled, and therefore not the plant Willdenow described as *Scirpus glaucescens*, which had three styles. If the Willd. Herb. plant has three styles, then A. Gray misidentified it, and it is not *E. palustris*. Someone who has access to the plant may determine the number of styles in order to prove whether or not it is *E. palustris*. Willdenow's description, with the exception perhaps of the "*glaucovirescens*" character is quite applicable to *E. acuminata*, and his characters of *three styles* and *compressed stems* clinch the identity. No other species of the

genus known to me so well fills the bill; certainly not the plants in America masquerading as *E. glaucescens*, for they have two stigmas and the stems are not compressed.

My conclusion is that *Scirpus glaucescens* Willd. ex descr. (non herb?) or *ELEOCHARIS GLAUDESCENS* (Willd.) Schultes is *E. acuminata* (Muhl.) Nees (*E. compressa* Sulliv.).

PARKE, DAVIS & Co., Detroit, Mich.

WILLDENOW'S TYPE OF *SCIRPUS GLAUDESCENS*

M. L. FERNALD

WHEN Miss Brackett and I pointed out¹ that *Eleocharis glaucescens* (Willd.) Schultes had long been misunderstood in this country, we emphasized the fact that it was described by Willdenow as having 3 style-branches. We also published Gray's manuscript memorandum made upon studying the Willdenow type: "*glaucescens*! (spec. cult. but very poor) nothing to do with *S. tenuis*, but certainly *S. palustris*!" But we did not accept this identification primarily upon the authority of Gray, as might be inferred from Mr. Farwell's statement in the preceding article. Ascherson & Graebner, who certainly were so situated as to know what Willdenow had before him but who surely did not know of Gray's unpublished memorandum, had reached the same conclusion;² so had Richter,³ Rouy,⁴ Hegi,⁵ and various other competent European students. In order again to determine what Willdenow had, Mr. J. F. Macbride, of the Field Museum, when studying type-specimens at the Botanisches Museum at Berlin-Dahlem, was asked to examine the specimen. His reply follows:

"As the Willdenow specimen is very meager, so that I dared not disturb one of the two heads, I asked Dr. Mattfeld (Curator of the *Cyperaceae* here) to confirm my observation regarding the number of style-branches. There are two styles visible and these appear to be unbroken and certainly to have only *two* branches! The specimen had been cultivated in the Garden and Dr. Mattfeld suggests that owing to the spiral arrangement of the flowers Willdenow may have seen seemingly three style-branches as this can be a mistake easy to make from fresh material when one may overtop or overlies another."

¹ RHODORA, xxxi. 61, 74 (1929).

² Aschers. & Graebn. Synop. Mitteleurop. Fl. ii², 291 (1903).

³ Richter, Pl. Europ. i. 142 (1890).

⁴ Rouy, Fl. de France, xiii. 361 (1912).

⁵ Hegi, Ill. Fl. Mittel.-Eur. ii. 38 (1909).

The identity of the Willdenow specimen need scarcely be further doubted; and certainly it has not been uncommon for technical and comparatively insignificant plants to be misdescribed. Witness Linnaeus's description of *Scirpus geniculatus*, Sp. Pl. i. 48 (1753), "spica subglobosa," for a plant with an elongate-lanceolate or slenderly cylindric spike. Mr. Farwell finds Willdenow's description "quite applicable to *E. acuminata*," except for the character "*Culmus* . . . glauco-virescens." How about the "*Squamae* . . . superiores . . . obtusiusculae"? Muhlenburg's original description of *Scirpus acuminatus* said "squama . . . *acuminata*,"¹ from which character he obviously derived the specific name; and Britton, who for decades has studied the group, says "scales . . . acute or the lower obtusish."² Even if it be argued that the usually careful Willdenow described a plant different from the one preserved by him, it would be at least unfortunate to displace an established name by one about which there is obviously great doubt.

GRAY HERBARIUM.

NEW FORMS AND VARIETIES OF INDIANA PLANTS

PAUL C. STANDLEY

DURING the summer of 1929 there have been observed in and near the Indiana dunes, at the southern end of Lake Michigan, several color forms of plants which are worthy of record. These and two new varieties of *Corcopsis tripteris* are described and named below.

TRADESCANTIA REFLEXA Raf., f. **Mariae**, f. nov.—Petala prope basin alba, undique prope marginem lilacina.—This distinct color form of our common spiderwort was collected near Fowler, INDIANA, in the summer of 1929, and the plants are now growing in the Dune Forest Wild Flower Garden near Chesteton, Indiana.

Specimens have not been preserved for the herbarium, because the petals of *Tradescantia* deliquesce in drying so that it would be impossible to preserve their coloring. The form is named for Miss Mary Bremer, who obtained the plants.

TRADESCANTIA REFLEXA Raf., f. **Lesteri**, f. nov.—Petala intense coccineo-purpurea.—Collected near Tremont, Porter County, INDIANA, in the summer of 1929 by Mr. Lester A. Beatty.

The plants have been transplanted to the Dune Forest Garden

¹ Muhl. Gram. 27 (1817).

² Britton in Britton & Brown, Ill. Fl. ed. 2, i. 318 (1913).

where they have continued flowering. The petals are of a bright poppy-red color, which is very beautiful, and quite distinct from the normal purple-blue of this species.

ASCLEPIAS TUBEROSA L., f. *LUTEA* Clute.—This handsome variant of the orange-flowered butterfly weed is rather frequent in the region of the sand dunes about the southern end of Lake Michigan in north-western Indiana. The flowers in this species exhibit striking variations in color, most of which are scarcely worthy of nomenclatural recognition. The following form, however, apparently of rare occurrence, is easily distinguishable:

ASCLEPIAS TUBEROSA L., f. **bicolor**, f. nov.—Corolla laete lutea; coronae squamae aurantiacae, apice interdum luteae.—INDIANA: Roadside near Porter, Porter County, July 20, 1929, *Paul C. Standley* 57304 (Herb. Field Mus. No. 599,386, TYPE).

In the dried specimens the color differences are not well preserved, but they are very conspicuous in living material.

VERNONIA MISSURICA Raf., f. **carnea**, f. nov.—Flores carnei vel rosei.—INDIANA: Roadside near Crocker, Porter County, September 2, 1929, *Paul C. Standley* 57350 (Herb. Field Mus. No. 599,385, TYPE).

The florets of this species are commonly purple, but in the form here described they are uniformly rose or flesh-colored. Only one clump of the pale-flowered plants was found.

EUPATORIUM PERFOLIATUM L., f. *PURPUREUM* Britton.—INDIANA: Edge of swamp near Tremont, Porter County, September 22, 1929, *Standley* 57362.

In this handsome and strikingly colored variant of the common boneset the flowers are of almost as deep a purple as in *E. purpureum*. I have found it in only one locality, but there it occurred in some abundance, with the normal white-flowered type.

COREOPSIS TRIPTERIS L., var. **Deamii**, var. nov.—Folia subtus pilis brevibus plerumque patentibus et saepe crispulis plus minusve dense pubescentia, supra scaberula vel rarius glabra; involucrium pilosulum vel villosulum.—ILLINOIS: Dry bluffs, Henderson County, August, 1871, *H. N. Patterson* (Herb. Field Mus. No. 17,866, TYPE). Marion County, in 1860, *Bebb*. Starved Rock, *Thone* 232. Dallas City, *Beckwith* 54. INDIANA: Pine, *Lansing* 3911. Clarke, Aug. 20, 1898, *Umbach*. MICHIGAN: Jackson County, Aug. 18, 1897, *S. H. & D. R. Camp*. "Southern Michigan," *Burgess* 433. MISSOURI: Near Jefferson Barracks, *Sherff* 1038. ARKANSAS: Near Texarkana, *Heller* 4129. PENNSYLVANIA: Marysville, Aug. 15, 1888, *Small*. NORTH CAROLINA: Salisbury, Aug. 21, 1890, *Heller*. Swain County,

August, 1891, *Beardslee & Kofoed*. GEORGIA: Estatoah Falls, Aug. 12, 1893, *Small*.

The usual form of *Coreopsis tripteris* is glabrous throughout. Linnaeus based the species upon a plate and description published by Morison (Pl. Hist. Univ. 3: 21. pl. 3, f. 44), who states¹ that the plant had been sent from Virginia by Banister. Morison's description is couched in rather general terms, and there is no mention of pubescence, nor is any indicated in the illustration. The pubescence in the variety here described is, however, so inconspicuous, although ample in amount, that one would scarcely expect to find it mentioned, especially since it has been overlooked by more recent botanists. It is here assumed, merely as a matter of convenience, that the more common, glabrous form of *Coreopsis tripteris* is the typical one.

Var. *Deamii* was called to my attention recently by Mr. C. C. Deam, who showed me a large series of specimens collected at numerous localities in Indiana, and suggested that the form should receive a name. The variety is consequently named in his honor, since he is too modest to be willing to describe it himself. Modesty is not one of the usual besetting sins of botanists, and in this case it is all the more to be regretted upon the part of one who possesses a knowledge of the flora of the upper Mississippi Valley, such as probably will not be attained by any other botanist in the very near future.²

Mr. Deam pointed out a single variety of *C. tripteris*, in which both the leaves and involucres are pubescent. Examination of the material in the herbarium of Field Museum shows, however, that there is another, intermediate form, in which the leaves are pubescent beneath, but the involucres are glabrous. This, also, seems to deserve formal recognition.

COREOPSIS TRIPTERIS L., var. **intercedens**, var. nov.—Folia subtus breviter pilosula vel interdum scaberulo-pilosula, supra scaberula vel glabrata; involucrem glabrum.—ILLINOIS: Edgewater, Chicago, Aug. 23, 1905, *F. Gates* 808 (Herb. Field Mus. No. 458,716, TYPE). Carthage, *Gates* 10104. Hinsdale, *E. C. Smith* 511. Athens, August, 1864, *Hall*. INDIANA: Griffith, *Peattie* 2029. MARYLAND: Potomac Flats, above the District of Columbia, Aug. 12, 1877, *Ward*. NORTH CAROLINA: Faith, *Small & Heller* 100.

FIELD MUSEUM OF NATURAL HISTORY, Chicago.

¹ I am indebted to Dr. Ivan M. Johnston for a copy of Morison's description.

² The Editors of RHODORA heartily concur.

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